KV-9300

US Model

Chassis No. SCC-170A-A



TRINITRON® COLOR TV

SPECIFICATIONS

Television System: American TV standards

Color System: NTSC

Picture Tube: 22 cm, 9" (screen measured diagonally),

90° deflection TRINITRON system

Semiconductors: 29 transistors, 1 FET, 5 ICs and

25 diodes

Antennas: VHF: 300 Ω balanced

75 Ω unbalanced (telescopic antenna)

(including slide switch)

UHF: 300 Ω balanced (loop antenna*)

* Note: Supplied with accessories

Channel Coverage: VHF channels: 2 - 13 UHF channels: 14 - 83

UHF channels: 14 – 8 Intermediate

Frequencies: Picture i-f carrier: 45.75 MHz

Color subcarrier: 42.17 MHz

Sound i-f carrier: 41.25 MHz

Sound System: 4.5 MHz intercarrier

Output power: 1 W max. Speaker: 8 cm $(3\frac{1}{4})$ inches dia, 8 Ω

Video System: R, G, B cathode drive

Automatic Controls: ABL (automatic brightness limiter)

ACA (automatic color attenuator)
ACC (automatic color control)
ACK (automatic color killer)

ADG (automatic degaussing)
AFC (automatic frequency control)
AFT (automatic fine tuning)
AGC (automatic gain control)

ANC (automatic noise canceller)
AVR (automatic voltage regulator)
AZC (automatic zooming control)

Anode Voltage: 22 kV at zero beam current

Power Requirements: 120 V ac, 60 Hz

Power Consumption: 75 W ac (max), 55 W (average) Dimensions: Approx. 262 (w) x 321 (h) x 359 (d) mm 10¹/₄ (w) x 12⁵/₈ (h) x 14¹/₈ (d) inches

Net Weight: Approx. 8 kg (17 lb 10 oz)

Accessories Supplied: Earphone (ME-20B)

UHF loop antenna (AN-15) Instruction manual

WARNING!!

TO ELIMINATE SHOCK HAZARD AND PROTECT EQUIPMENT WHEN SERVICING THE SFT WITH THE COVERS REMOVED, MAKE SURE THAT THE SET IS PLUGGED INTO A SUITABLY-RATED ISOLATION TRANSFORMER.

SAFETY-RELATED COMPONENT WARNING!

COMPONENTS IDENTIFIED BY SHADING AND MARK ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY, CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.



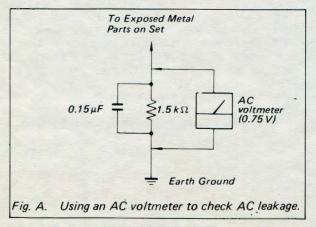
SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

- Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
- Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
- Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
- Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
- Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
- Check the line cord for cracks and abrasion.
 Recommend the replacement of any such line cord to the customer.
- Check the condition of the monopole antenna (if any).
 Make sure the end is not broken off, and has

the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.

- Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
- Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.



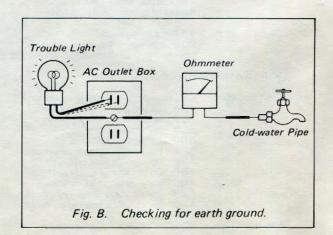
LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

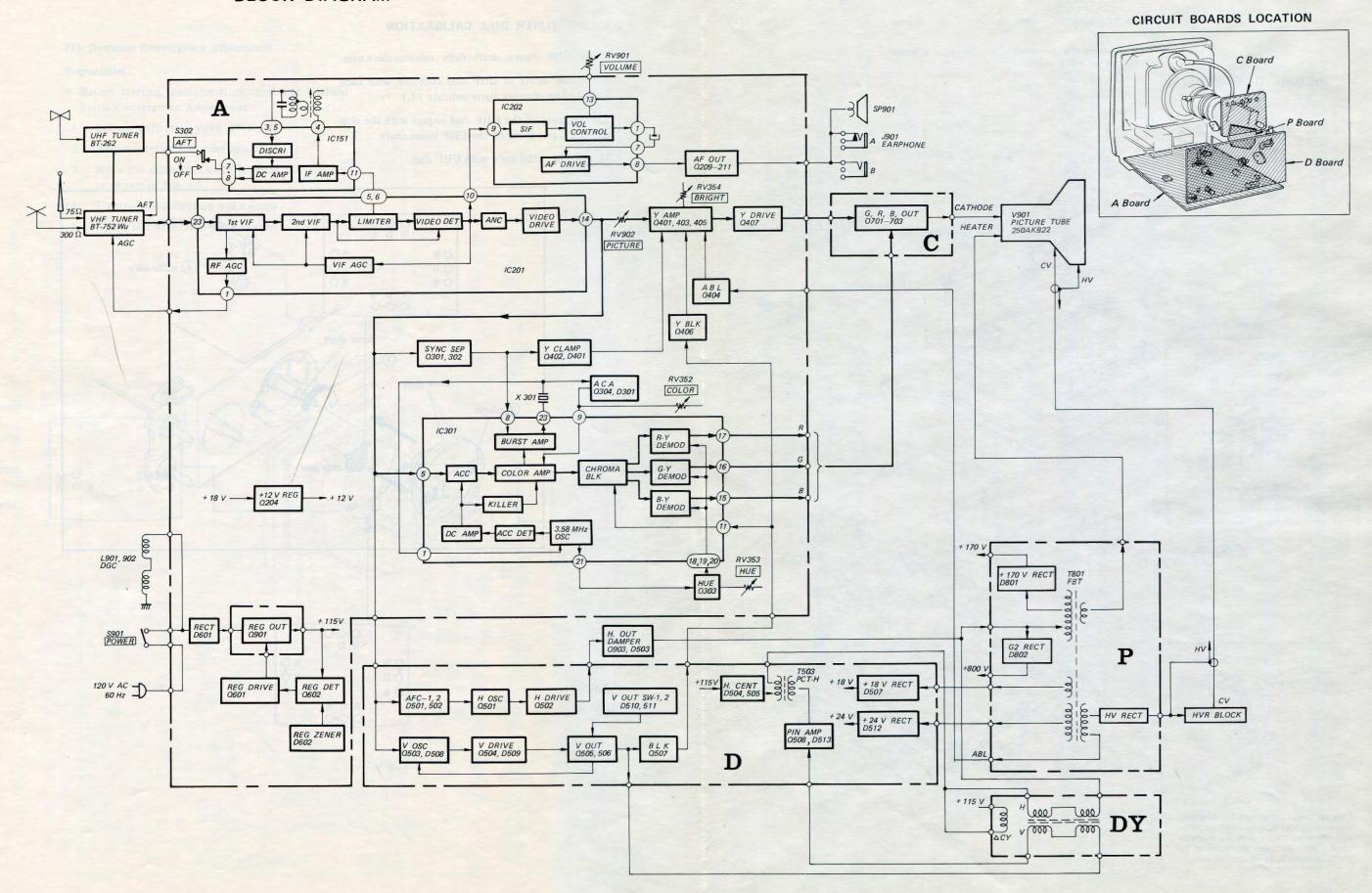
- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60–100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)



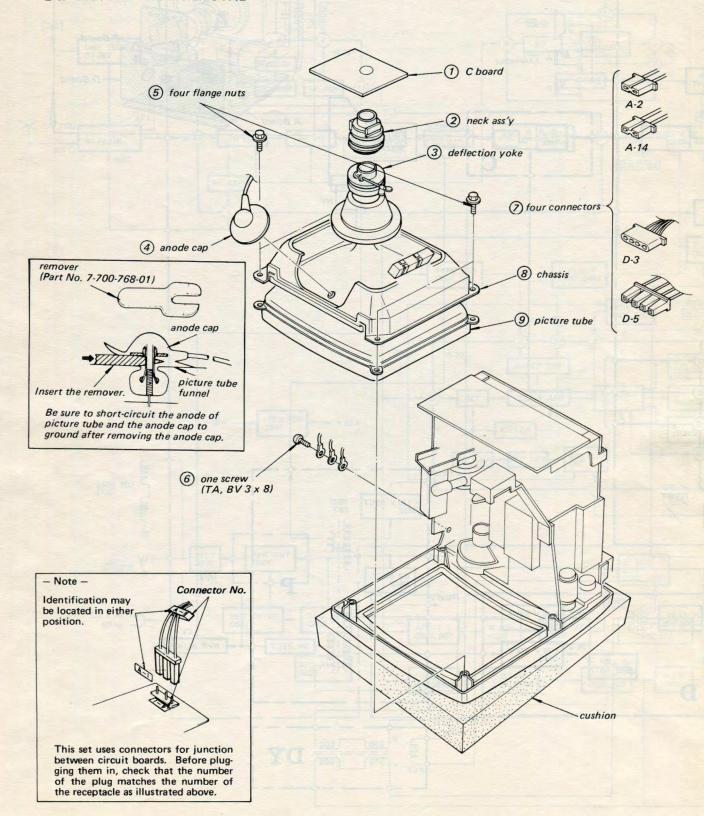
SECTION 1
BLOCK DIAGRAM



SECTION 2 DISASSEMBLY AND REPLACEMENT

- Follow the disassembly procedure in the numerical order given.
- When removing the rear cover, take out all the screws around marked ⇒ on it.

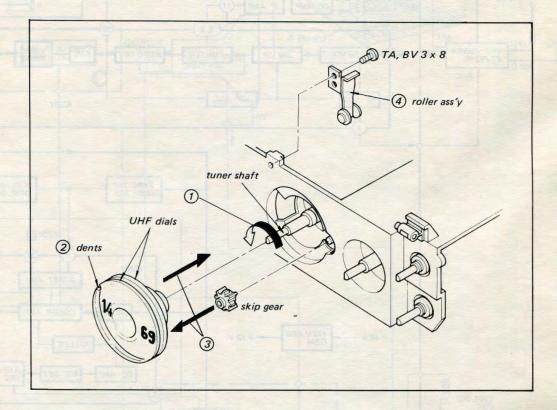
2-1. PICTURE TUBE REMOVAL



MADONIO NOO II

2-2. UHF TUNER DIAL CALIBRATION

- 1. Turn UHF tuner shaft fully counterclockwise.
- 2. Let these dents of UHF dial coincide with each other. (The channel digits indicate 14.)
- 3. Let the gear of the UHF dial engage with the skip gear, and put them on the UHF tuner shaft.
- 4. Attach the roller ass'y with UHF dial.



SECTION 3

CIRCUIT ADJUSTMENTS

- (1) The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- (2) These adjustment should be performed with the rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows:

PICTURE control . . . fully clockwise (maximum) BRIGHT control ... fully leftwards (maximum) AUTO, AFT switches . . . ON (maximum)

Make the following adjustments in the order as follows given:

- 1. Beam Landing
- 2. Convergence
- White Balance 3.

Note: Test Equipment Required.

- 1. Color-bar/Pattern Generator
- 2. Degausser

3-1. BEAM LANDING

Preparation:

- Feed in the white pattern.
- Before starting, degauss the entire screen.
- 1. Loosen deflection yoke screw.
- 2. Set purity control as shown in Fig. 3-1.
- 3. Slide deflection yoke as far forward as it will go.
- 4. Position neck ass'y as shown in Fig. 3-2.
- 5. Disconnect leads 2 and 3 on the C board.
- 6. Adjust purity control to center vertical red band as shown in Fig. 3-3.
- 7. Slide deflection yoke back for a uniform red
- 8. Check green and blue rasters for uniformity by performing the same way as steps 5, 6 and 7.

To get a uniform green screen,

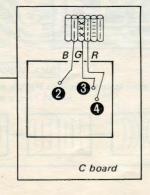
connect lead 3 and disconnect leads 2 and 4 on the C board.

To get a uniform blue screen.

connect lead 2 and disconnect leads 3 and 4 on the C board.

After these checks, connect the leads 2. 3 and 4.

- 9. Tighten the deflection yoke screw.
- 10. Check if mislanding appears at corners a-d as shown in Fig. 3-4. If mislanding is observed, correct it as shown in Fig. 3-4.
- 11. Confirm that beam landing is correct when the receiver is faced in all direction.



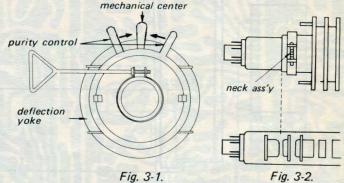
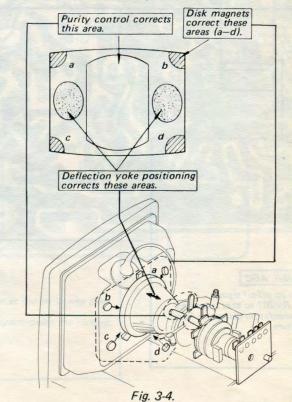


Fig. 3-1.



Fig. 3-3.



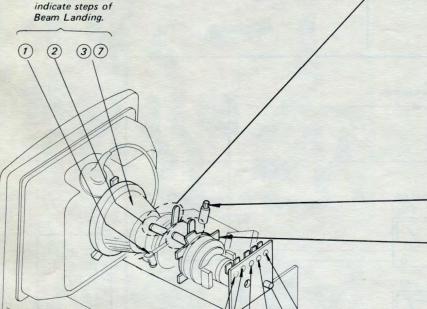
-7-

3-2. CONVERGENCE

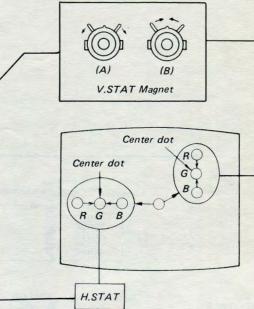
Preparation:

- Before starting, perform FOCUS, H.SIZE, V.SIZE and V.LIN adjustments.
- · Set BRIGHT control to fully rightwards.
- · Feed in the dot pattern.

Note: Circled numbers indicate steps of Beam Landing.



(1) Horizontal and Vertical Static Convergence



If blue dot does not coincide with red and green dots,

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

3-3. WHITE BALANCE

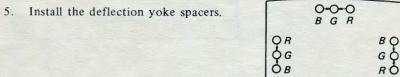
Feed in the cross-hatch pattern.

- 1. Turn PICTURE control fully counterclockwise, and set BRIGHT control to fully rightwards.
- 2. Turn RV702 (B.DRIVE) and RV704 (G.DRIVE) fully clockwise.
- 3. Set RV703 (B.BKG), RV706 (R.BKG), and RV705 (G.BKG) to mechanical center.
- 4. Turn RV701 (SCRN) slowly to obtain a faintly visible cross-hatch. Note the color that first becomes visible by turning RV701. Do not turn a BKG control for this color.
- 5. Adjust the other two BKG controls for best white balance (neutral gray) of the faint crosshatch.
- 6. Turn PICTURE control fully clockwise, and set BRIGHT control to fully leftwards. Observe the screen and adjust the DRIVE controls for best white balance.
- 7. Repeat Steps 1 through 6 several times.

(2) Dynamic Convergence Adjustment

Preparation:

- · Before starting, perform Horizontal and Vertical Static Convergence Adjustment.
- 1. Loosen deflection yoke screw.
- 2. Remove deflection yoke spacers.
- 3. Move the deflection yoke for best convergence as shown in Fig. 3-5.
- 4. Tighten the deflection yoke screw.



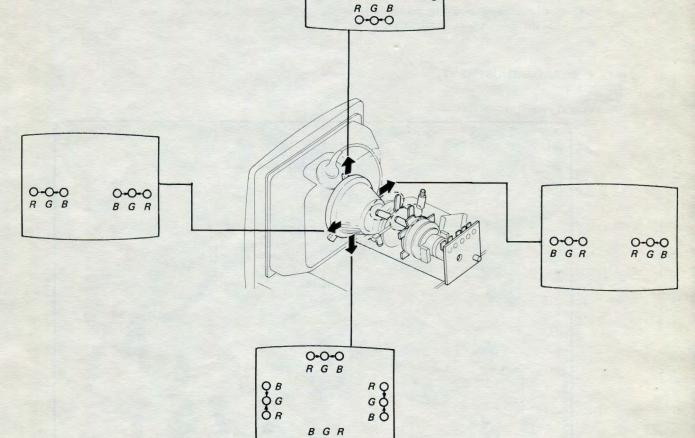


Fig. 3-5.

RV706 R. BKG

RV701 SCRN

RV705 G. BKG

RV703 B. BKG

RV704 G. DRIVE

RV702 B. DRIVE

0-0-0

KV-9300

KV-9300 KV-9300

Note: (1) TEST EQUIPMENT REQUIRED

- 1. Oscilloscope
- 2. Voltmeter (VOM)
- 3. Color-bar/pattern generator
- 4. Variable auto-transformer.

(2) INPUT SIGNAL

When making these adjustments, feed in a crosshatch, color-bar or an off-air signal.

(3) CONTROL AND SWITCH SETTINGS

Controls and switches should be set as follows when making checks and adjustments unless otherwise noted.

PICTURE control HUE control

BRIGHT control Set for best picture

COLOR control AUTO switch . . . ON AFT switch ON

(4) These adjustment should be performed

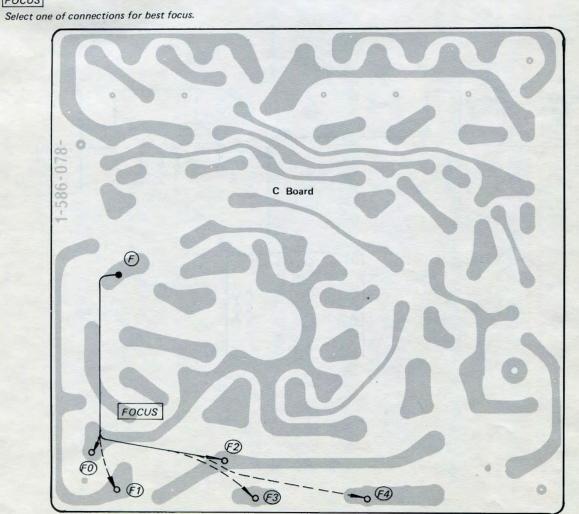
with the rated power supply voltage

unless otherwise noted.

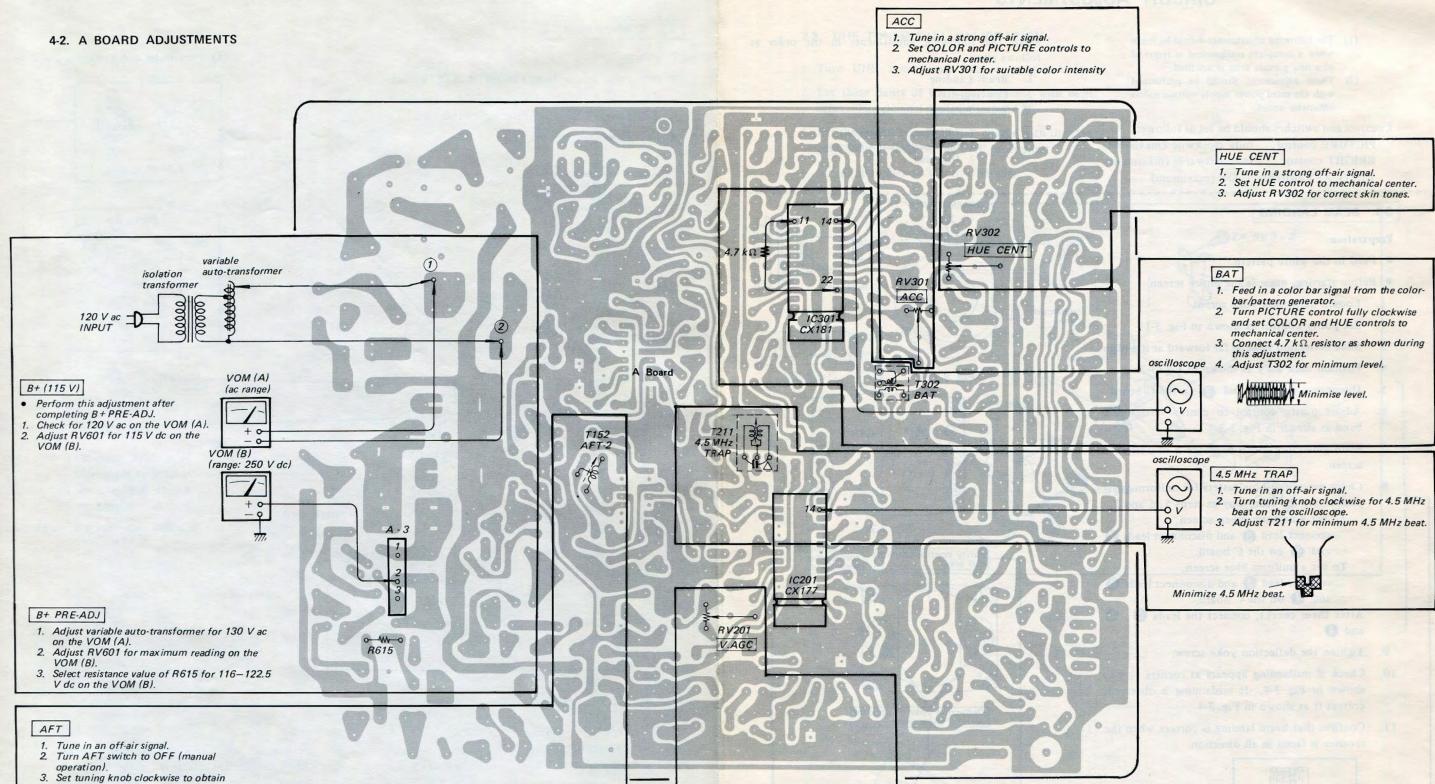
4-1. C BOARD ADJUSTMENT FOCUS

(5) CIRCUIT ADJUSTMENTS

Adjustment	Circuit Board	Page		
FOCUS	C	10		
B+ (115 V)				
AFT		11		
VHF TUNER AGC				
ACC	A			
HUE CENT		12		
BAT		12		
4.5 MHz TRAP				
H OSC CONTROL	THE PARTY OF			
PINCUSHION AMP	D	13		
H FREQ				



- 10 -



920 kHz beat. 4. Set tuning knob to the point where

the 920 kHz beat just disappears by slowly turning tuning knob counterclockwise. 5. Set the AFT switch to ON. The 920

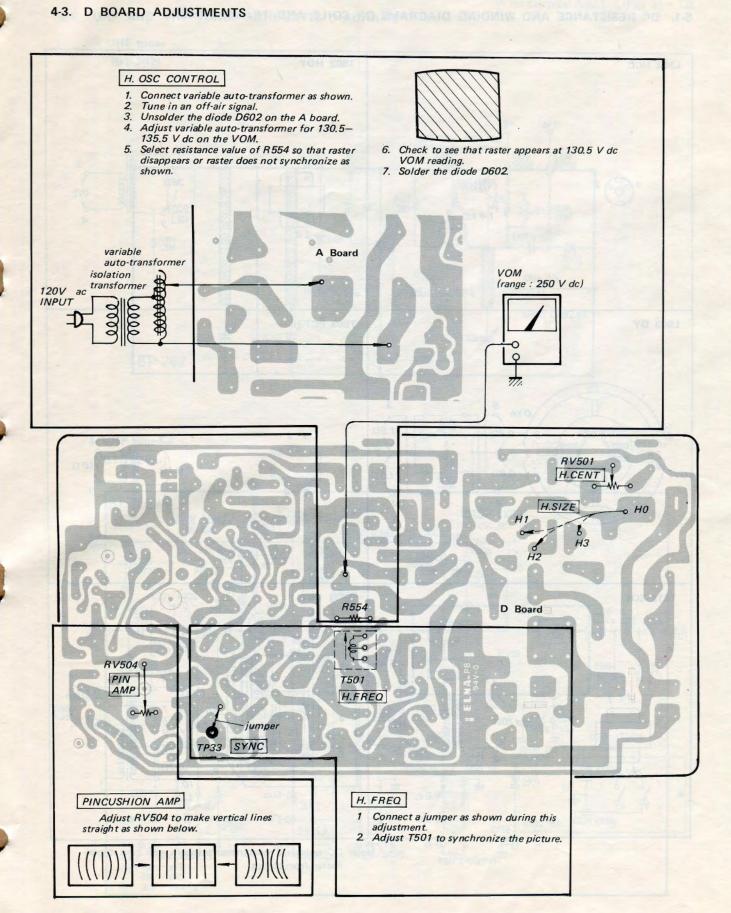
kHz beat will appear or "no color"
will occur, if the adjustment is improper.
6. Set T152 to the point where the 920 kHz beat just disappears or normal color is



-11-

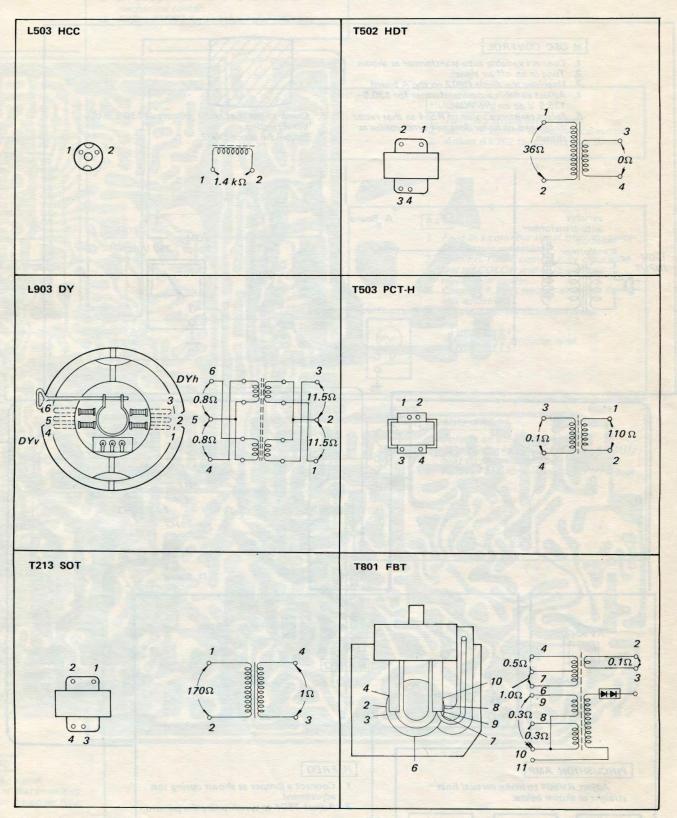
VHF TUNER AGC

 Tune in an off-aif signal.
 Adjust RV201 so that snow and cross-modulation disappear from the picture.



SECTION 5 DIAGRAMS

5-1. DC RESISTANCE AND WINDING DIAGRAMS OF COILS AND TRANSFORMERS

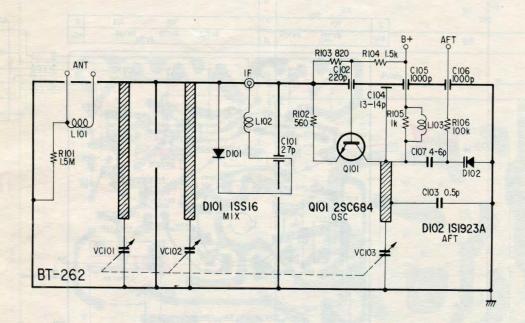


Note: DC resistance measurements shown with coils disconnected from circuit.

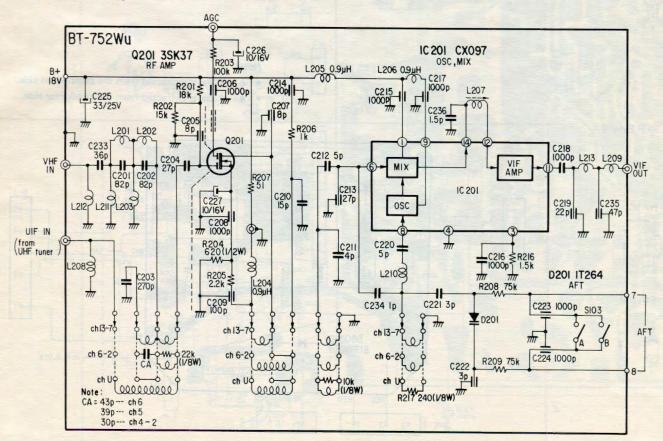
Note: 1. Tuner reference numbers are not included in the Electrical Parts List (Page $27 \sim 32$).

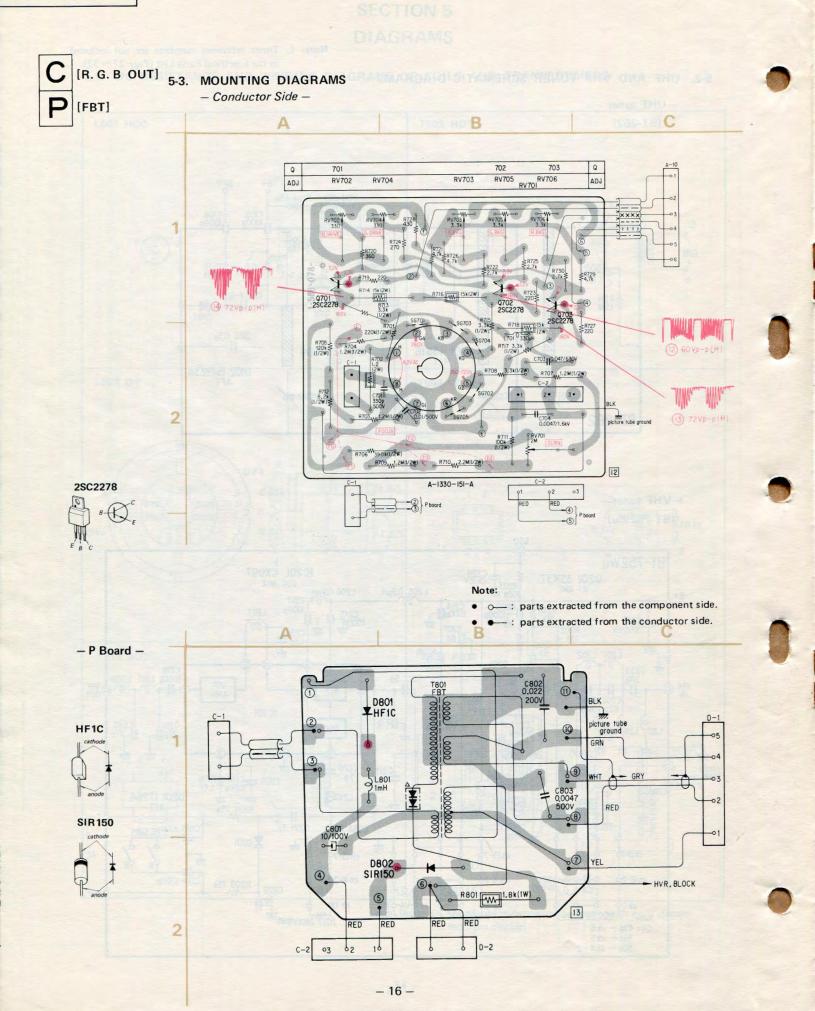
5-2. UHF AND VHF TUNER SCHEMATIC DIAGRAMS

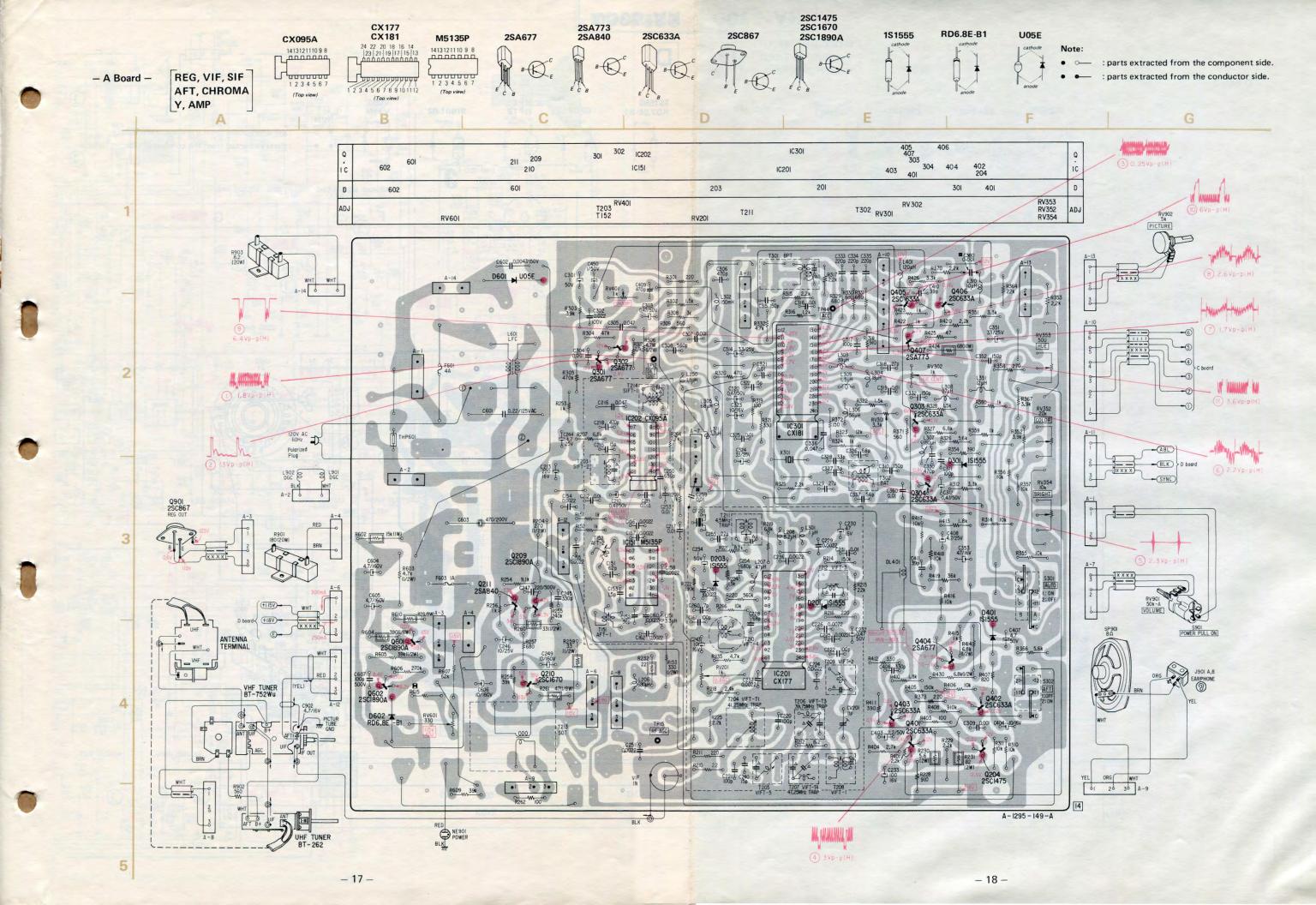
- UHF tuner -(BT-262)

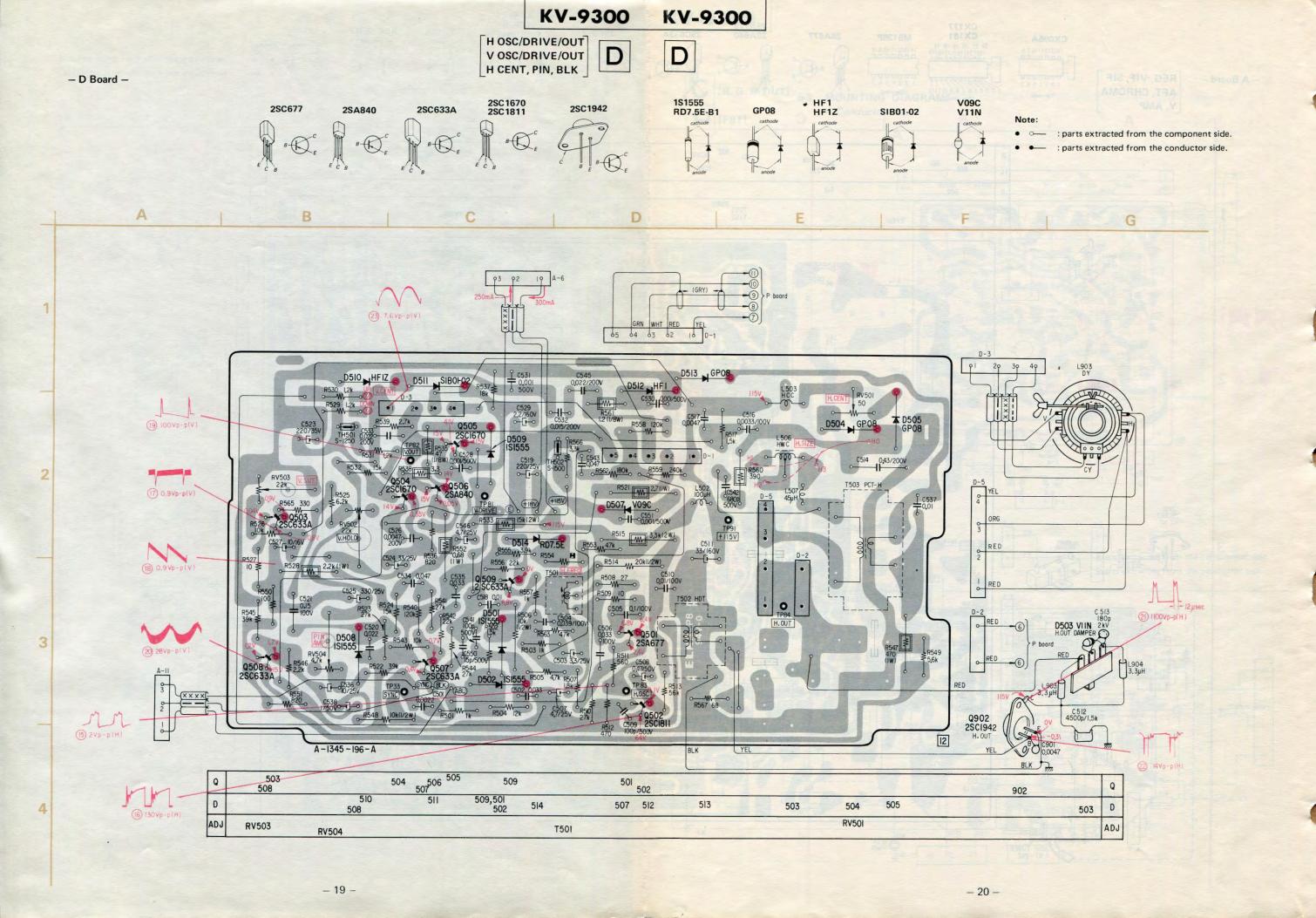


- VHF tuner - (BT-752Wu)







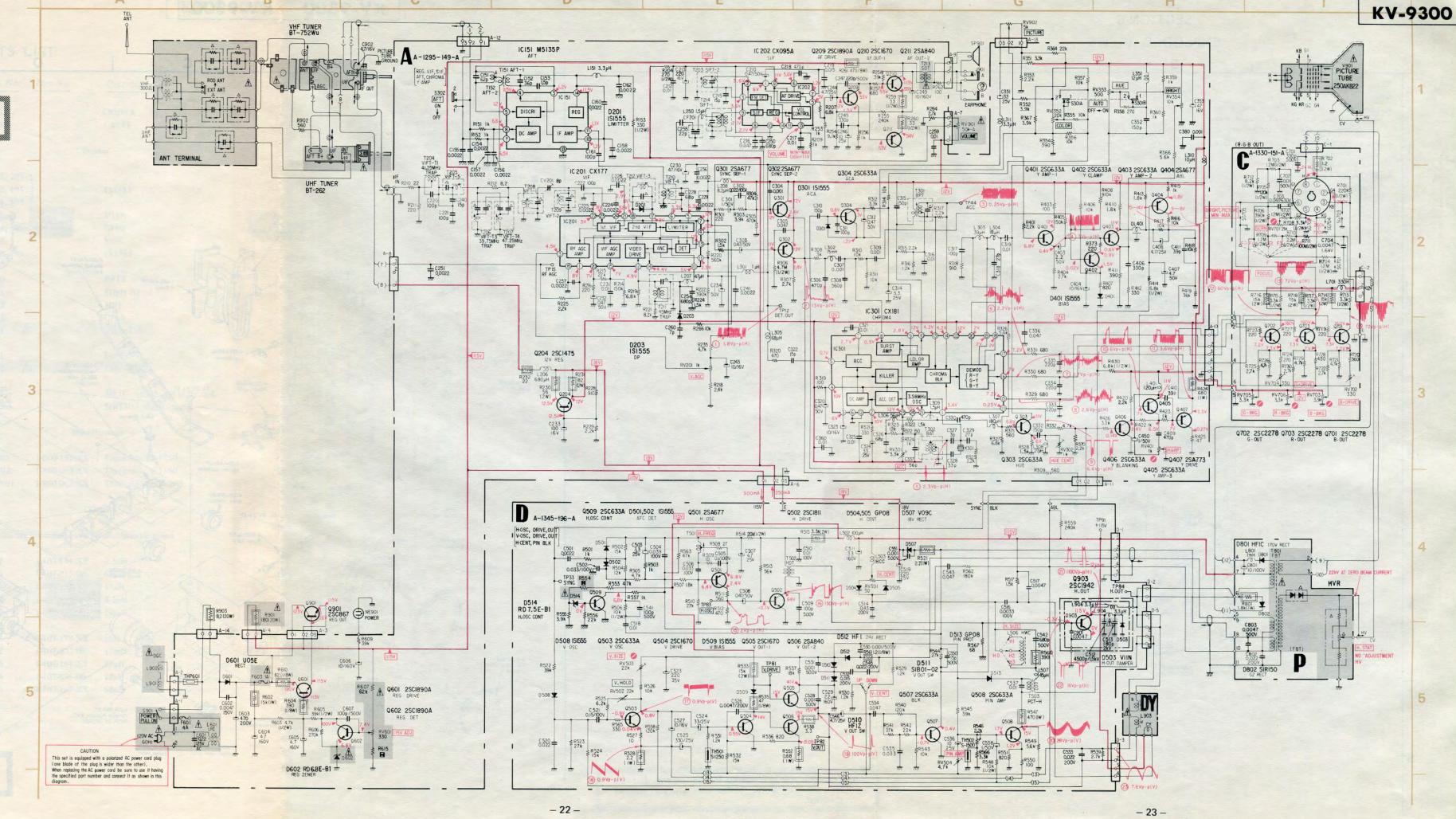


5-4. SCHEMATIC DIAGRAM

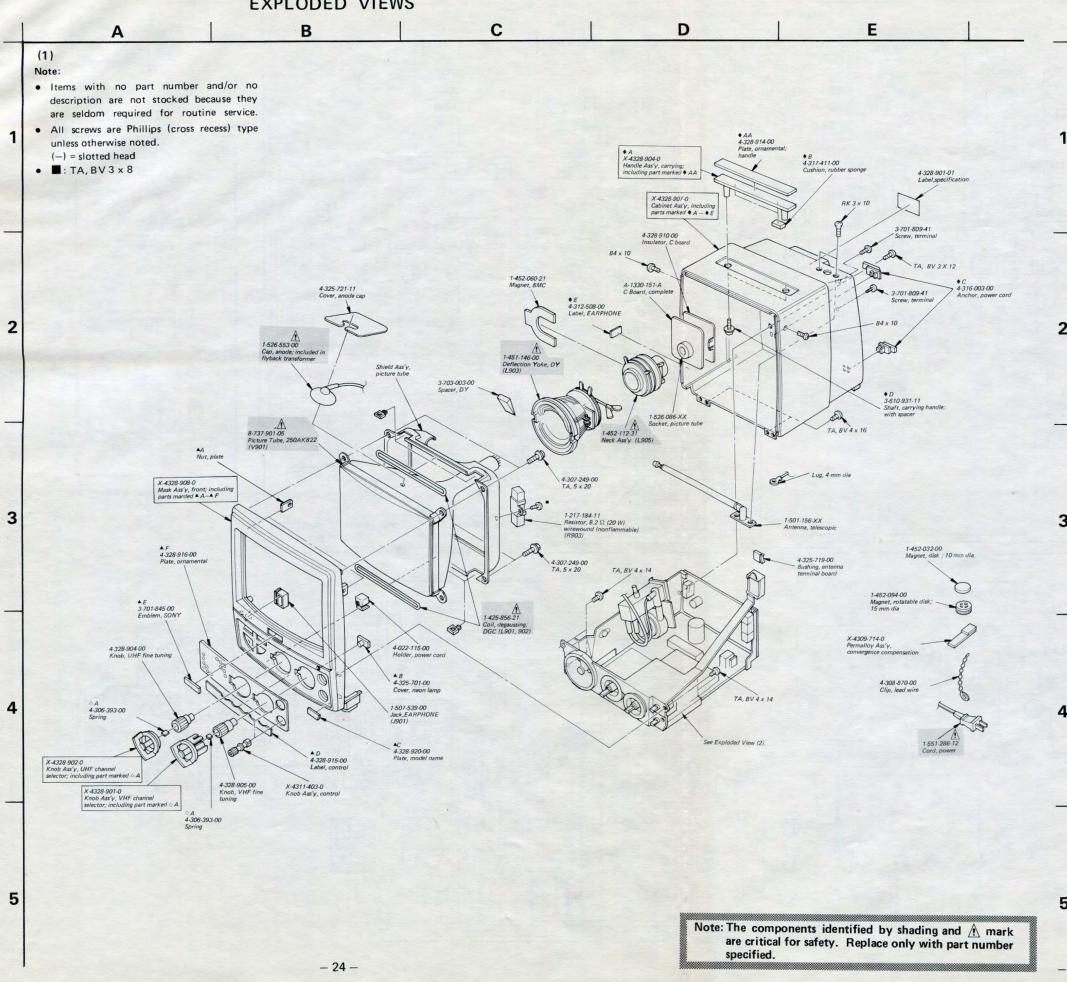
Note: The components identified by shading and A mark are critical for safety. Replace only with part number specified.

Note

- All capacitors are in μF unless otherwise noted. p: μμF 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{2}$ W unless otherwise noted. $k\Omega = 1000 \Omega$; $M\Omega = 1000 k\Omega$
- : nonflammable resistor.
- A : internal componen
- panel designation
- Factory-selected value.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- S901 is ganged to RV901.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 20,000-ohm-per-volt VOM.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- adjustable without removing cabinet.
- _____: adjustment for repair.



SECTION 6 EXPLODED VIEWS



(2) • Items with no part number and/or no description are not stocked because they are seldom required for routine service. · All screws are Phillips (cross recess) type unless otherwise noted. (-) = slotted head • ■: TA, BV 3 x 8 1-224-646-XX Variable Resistor, 22 kΩ; V. HOLD 4-325-714-11 4-325-632-00 1-536-401-XX A-1345-196-A D Board, complete 4-313-734-00 Bushing, transistor 4-313-735-00 3-701-353-00 1-224-972-00 Variable Resistor 20 kΩ; COLOR (RV352) Bushing, transisto 1-226-078-00 TA, BV 4 x 1 Bracket, D board A-1295-149-A A Board, complete 4-314-938-00 Holder, transistor 4-325-704-00 Knob, control 4-328-903-00 Bushing, heat sink 1-552-340-00 Switch, rotaly; AUTO (S301); AFT (S302) X-4328-903-0 Roller Ass'y 4-328-918-00 _ 1-534-630-00 Coaxial Cable with Plug 4-325-705-00 Knob, switch 1-534-872-00 Coaxial Cable with Plug 1-463-133-00 X-4328-906-0 Dial Ass'y, UHF channel PS 3 x 6 1-551-249-00 Coaxial Cable w 1-224-259-XX 4-328-911-00 4-308-211-00 Holder, neon lamp Note: The components identified by shading and A mark are critical for safety. Replace only with part number specified.

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HF1C \((included in flyback SIR150 | transformer)

SECTION 7 ELECTRICAL PARTS LIST

Ref. No. Part No.	Description	Ref. No.	Part No.	Description
TUNERS AND	CIRCUIT BOARDS	IC202		CX095A
vill abeli	a to the same	IC301		CX181
<u>1-463-133-00</u>	VHF Tuner, BT-752Wu			T=05-181-30E
<u>1-463-180-00</u>	UHF Tuner, BT-262		Dio	des
1-586-030-00	P Board			
Station of State of S		D201, 203	The Hall	
A-1295-149-A	A Board, complete	D301, 401	Name of the Person	1S1555
A-1330-151-A	C Board, complete	D501, 502		
A-1345-196-A	D Board, complete	D503		V11N
	The state of the s	D504, 505		GP08
SEMICO	NDUCTORS	D507		V09C
	N. British and S.	D508, 509		1S1555
Tra	nsistors	Fine W		
0204	2901476	D510		HF1Z
Q204	2SC1475	D511		SIB01-02
Q209	2SC1890A	D512		HF1
Q210	2SC1670	D513	11世界地区	GP08
Q211	2SA840	D514 /	<u> </u>	RD7.5E-B1
Q301, 302	2SA677	D601		U05E
Q303, 304	2806224		A	RD6.8E-B1
2401–403	2SC633A	Call a		
		D801		HF1C \((included i
Q404	2SA677	D802		SIR150 transform
Q405, 406	2SC633A	cou		
Q407	2SA773	0.902	Miscel	laneous
Q501	2SA677	TH501	1-800-198-XX	Thomaston C 1250
Q502	2SC1811	TH502	1-800-069-XX	Thermistor, S-1250
Q503	2SC633A	THP601	1-800-065-XX	Thermistor, S-1500
Q504, 505	2SC1670	1111001	1-000-003-AA	Thermistor (positive
Q506	2SA840		00	ILS MARKET
Q507-509	2SC633A	E Lane		illo
		All coils are	e microinductors u	nless otherwise noted.
Q601, 602	2SC1890A	All colls all	e interomate tors a	mess outerwise noted.
		L151	1-407-184-XX	3.3μΗ
Q701-703	2SC1127	L206	1-407-715-00	680µH
		L207	1-407-165-XX	47μΗ
	2SC867	L208	1-407-189-XX	8.2μΗ
Q901				
	2SC1942	L250	1-407-180-XX	1.5μΗ
Q902	2SC1942	L250		
Q902	2SC1942	L250 L301	1-407-178-XX	1μΗ
Q902	2SC1942	L301 L302	1-407-178-XX 1-407-877-00	1μH 15mH
Q902	2SC1942	L250 L301	1-407-178-XX	1μΗ

Ref. No.	Part No.	Description
	The audition of C	Ref. No. Part No.
L306	1-407-747-00	56μH
L307	1-407-172-XX	180µН
L308	1-407-162-XX	27µН
L309	1-407-180-XX	1.5µН
L351	1-407-158-XX	12µН
LJJI	1-40/-150-707	12411
L401	1-407-170-XX	120μΗ
L502	1-407-169-XX	100.11
L503	1-459-194-00	Harizantal Cantarina
Loos	1437-174-00	Chales HCC
L506	1-459-199-00	H ' HW'LL HWG
L507	1-459-155-00	45
L301	1-439-133-00	A CONTRACTOR
L509	1-407-365-00	0.74μH, spook choke
L601	↑ 1-441-855-00	Lina Filtas LEC
L701	1-407-175-XX	220
L801	1-407-195-XX	1II (in aboded in flesh ask
Loui	1-407-193-AA	transformer)
		A CANADA
1 901 90	2 1-425-856-21	Degaussing, DGC
L903	⚠1-451-146-00	Deflection Voke DV
L905	A1-452-112-31	Neck Ass'y
DL401	1-415-132-00	Delay Line
DL401	1-413-132-00	Delay Line
	TRANSCORME	RS AND FILTER
	TRANSFORMER	AND FILTER
CF 201	1-527-260-00	Ceramic Filter
CI 201	1-327-200-00	Celame I liter
T151	1-403-904-00	AFT-1 OF DORES
T152	1-403-905-00	A FOR A
T203	1-403-871-00	OLEM A
T204	1-409-213-00	VIFT-T1, 41.25 MHz trap
T204	1-409-256-00	VIFT-5
1203	1-409-236-00	VIF1-5
T206	1 400 210 00	VIFT-T3, 39.75MHz trap
T206	1-409-319-00	
T207	1-409-318-00	VIFT-T4, 47.25MHz trap
T208	1-403-925-00	VIFT-1
T209	1-403-925-00	VIFT-2
T210	1-403-731-00	VIFT-4
m211	1 400 446 00	A CANAL TO
T211	1-409-146-00	4.5MHz Trap
T212	1-403-550-00	VIFT-3
T213	△ 1-427-438-00	Sound Output, SOT
T214	1-403-360-00	SIFT-1
T301	1-425-786-00	Bandpass, BPT
T302	1-425-785-00	Burst Amprifier, BAT
	100	802.1 302.1 302.1 BUZ.1
T501	1-405-760-00	Horizontal Blocking, HBT
T502	1-437-071-00	Horizontal Drive, HDT
T503	1-421-263-00	Horizontal Pincushion Correction,
	1 . 21 203 00	PCT-H

Ref. No.	Part No.	Description
T801	<u>↑</u> 1-439-211-31 including	Flyback, FBT
D801	A	Diode, HF1C
D802	$\overline{\mathbb{A}}$	Diode, SIR150
L801	▲ 1-407-195-XX	Coil, 1 mH
C801	▲ 1-121-126-11	Capacitor, 10 µF 100 V elect
C802	<u>1-108-696-61</u>	Capacitor, 0.022 μF 200 V mylar
C803	<u></u> 1-102-085-11	Capacitor, 0.0047 μF 500 V ceramic
R801	1-213-146-11	Resistor, 1.8 kΩ 1 W metal oxide
		(nonflammable)
	▲ 1-526-553-00	Cap, anode

CAPACITORS

All capacitors are in μ F and ceramic unless otherwise noted. 50 WV or less are not indicated except for electrolytics. p: $\mu\mu$ F, elect = electrolytic

C151	1-102-493-11	62 p		
C152	1-102-519-11	36 p		
C153	1-102-576-11	1.5 p		
C154-158		0.0000		
C160	1-102-121-11	0.0022		
C161	1-102-973-11	100 p		
C162	1-102-121-11	0.0022		
C210	1-121-951-11	0.47	50 V	elect
C212	1-101-118-11	0.01		
C213	1-123-068-11	220	16 V	elect
C215	1-102-668-11	15 p		
C216	1-101-006-11	0.047		
C217	1-101-004-11	0.01		
C218	1-102-114-11	470 p		
C219	1-161-015-11	0.015		(semiconductor)
C220	1-102-529-11	100 p		
C221, 222	1-102-973-11	100 p		
C224-226	1-102-121-11	0.0022		
C228	1-102-525-11	68 p		
C229	1-102-121-11	0.0022		
C230	1-121-409-11	47	16 V	elect
	THE SECTION			I I I I I
C231	1-161-013-11	0.01		(semiconductor)
C232	1-121-726-11	0.47	50 V	elect
C233	1-121-415-11	100	16 V	elect
C234	1-121-391-11	1	50 V	elect
C236, 237	1-102-121-11	0.0022		

Ref. No.	Part No.	Description					
C240	1-102-951-11	15 p					
C241	1-102-121-11	0.0022					
C243	1-121-651-11	10	16 V	elect			
C244	1-121-395-11	4.7	25 V	elect			
C245	1-102-820-11	330 p					
C246	1-121-398-11	10	25 V	elect			
C247	1-102-244-11	220 p	500 V				
C249	1-1 23-178-11	10	160 V	elect			
C250	1-102-116-11	680 p					
C251	1-102-121-11	0.0022					
C254	1-101-439-11	680 p					
C255	1-102-959-11	22 p					
C259	1-101-118-11	0.01					
C260	1-102-944-11	7 p					
C301	1-121-391-11	1	50 V	elect			
C302	1 108-381-12	0.022	100 V	mylar			
C303	1-121-726-11	0.47	50 V	elect			
C304	1-102-074-11	0.001					
C305	1-101-006-11	0.047					
C306	1-102-824-11	470 p					
C307	1-102-074-11	0.001					
C308	1-102-115-11	560 p					
C309	1-102-074-11	0.001					
C310	1-101-361-11	150 p					
C311	1-102-973-11	100 p					
C312	1-121-726 11	0.47	50 V	elect			
C314	1-121-392-11	3.3	25 V	elect			
C315	1-102-888-11	150 p					
C316	1-101-004-11	0.01					
C317	1-102-973-11	100 p					
C318	1-102-961-11	27 p					
C319	1-101-004-11	0.01					
C320	1-121-726-11	0.47	50 V	elect			
C321	1-101-004-11	0.01					
C322	1-102 951-11	15 p					
C323	1-121-651-11	10	16 V	elect			
C324	1-121-404-11	33	25 V	elect			
C325	1-101-004-11	0.01					
C326	1-101-888-11	68 p					

Ref. No	Part No.	Descri	ption	
C327	1-102-936-11	3 p		
C328	1-102-877-11	33 p		
C329	1-102-516-11	27 p		
C330	1-102-824-11	470 p	1 August	
C332	1-101-361-11	150 p		
C333-335	1-102-978-11	220 p		
C336	1-101-006-11	0.047		
C337	1-102-758-11	56 p		
C351	1-121-404-11	33	25 V	elect
C352	1-101-361-11	150 p		
C353	1-121-409-11	47	16 V	elect
C360	1-101-004-11	0.01		
C403	1-121-450-11	2.2	50 V	elect
C404	1-121-651-11	10	16 V	elect
C406	1-102-112-11	330 p		
C407	1-121-396-11	4.7	50 V	elect
C408	1-121-395-11	4.7	25 V	elect
C409	1-102-824-11	470 p		
C410, 411	1-102-965-11	39 p		
C450	1-121-391-11	1	50 V	elect
C501	1-161-005-11	0.0022		(semiconductor
C502	1-108-383-12	0.033	100 V	mylar
C503	1-121-392-11	3.3	25 V	elect
C504	1-108-384-12	0.039	100 V	mylar
C505	1-108-389-12	0.1	100 V	mylar
C506	1-130-117-11	0.033	100 V	polyethylene
C507	1-121-395-11	4.7	25 V	elect
C508	1-121-726-11	0.47	50 V	elect
C509	1-101-810-11	100 p	500 V	
C510	1-108-377-12	0.01	100 V	mylar
C511	1-123-024-11	33	160 V	elect
C512	1-130-121-11	4500 p	1.5 kV	polyethylene
C513	1-102-154-12 1-102-154-12 1-102-154-12	180 p	2 kV	
C514	1-130-069-11	0.43	200 V	polyethylene
C516	1-108-371-12	0.0033	100 V	
C517	1-161-009-11	0.0047		(semiconductor
C518	1-161-013-11	0.01		(semiconductor
C519	1-121-936-11	220	25 V	elect

				Ref. No.		-	otion	
C520	1-161-017-11	0.022	(semiconductor)	C901	1-101-003-11	0.0047		
C521	1-108-391-12	0.15 100		C902	1-121-257-11	4.7	16 V	elect
C523	1-121-937-11	220 35	V elect	CV201	1-141-138-XX	8 p	trimme	er
	1-121-404 11	33 25		A STATE OF THE PARTY OF THE PAR				
	1-121-989-11	330 25			RESI	STORS		
	1-121-969-11	0.0047 200			10.1	11173		
	1-108-417-12	10 16	the same of the sa	All resistors	are in ohms. Com	mon ¼W c	arbon r	esistors are
C321	1-131-136-11	10 10	v talitaium		fer to the list on p			
C528	1-102-038-11	0.001 500	V		and adjustable res			
	1-102-036-11		V elect		herwise noted. kΩ			
	1-102-038-11	0.001 500		, wancos o a	4.1/19.24		110	
	1-102-036-11		V DV mylar	R153	1-213-137-11	330	½ W	metal oxide
	1-108-425-12		V mylar	R204	1-213-136-11	270	½ W	metal oxide
C333	1-100-425-12	0.022 200	, v mylai	R230	1-206-481-11	56	2 W	metal oxide
C534	1-161-059-11	0.047	(semiconductor)					(nonflammable)
	1-161-039-11	0.047	(semiconductor)	R231	1-206-485-11	82	2 W	metal oxide
	1-121-398-11	10 25						(nonflammable)
	1-161-051-11	0.01		R259, 260	1-211-602-11	33	½ W	carbon
	1-121-391-11	1 50		Called Landon Plants of				(nonflammable)
C336	1-121-391-11	1	ALID VIII	R261	1-211-933-11	47	1/8 W	carbon (nonflammable)
C541	1-101-810-11	100 p 500		R306	1-202-727-11	4.7 M	½ W	composition
C542	1-102-002-11	680 p 500	1	R414	1-202-593-11	6.8 k	½ W	composition
	1-161-036-11	0.047	(semiconductor)	R424	1-213-141-11	680	1 W	metal oxide
	1-108-425-12	0.022 200						(nontlammable)+
C546	1-121-395-11	4.7 25		R430	1-202-593-11	6.8 k	½ W	composition
	ANEOUS	MESCELL						2019
C550	1-102-316-11	15 p 500	V	R506	1-213-155-11	10 k	½ W	metal oxide
	1-102-038-11	0.001 500		R514	1-244-904-11	20 k	½ W	carbon
			ent the	R515	1-206-676-11	3.3 k	2 W	metal oxide
C601 A	1-108-913-21	0.22 12	V ac mylar					(nonflammable)
	1-102-189-11	0.0047 150		R521	1-212-365-11	2.7	1 W	metal oxide
C603	1-125-170-11	470 200	V elect					(nonflammable)
	1-121-246-11	4.7 160	V elect	R528	1-212-364-11	2.2	1 W	metal oxide
	1-123-178-11		V elect					(nonflammable)
	1-101-810-11	100 p 500						
		XX.180-91	44 100 E01 ag	R533	1-206-692-11	15 k	2 W	metal oxide
C701	1-102-030-11	330 500	V					(nonflammable)
	1-102-050-11	0.01 50	V	R535	1-211-933-11	47	1/8 W	carbon
	1-129-737-11		V polyethylene					(nonflammable)
C704	1-102-223-11	0.0047 1.6		R538		3.3	1/4 W	carbon
			Market and the					(nonflammable)
C801	1-121-126-11	10 10	V elect	R547	1-213-139-11	470	1 W	metal oxide
C802	1-108-696-61		V mylar					(nonflammable)
C803	1-102-085-11	0.0047 50	V	R548	1-202-597-11	10 k	½ W	composition
		(include	l in flyback transformer)					

Ref. No.	Part No.	Descri	ption		Ref. No.	Part No.	Description
R552	1-212-358-11	0.68	1 W	metal oxide	RV201	1-224-642-XX	1 k, adjustable; V. AGC
				(nonflammable)	RV301	1-224-644-XX	3.3 k, adjustable; ACC
R554	\triangle		1/4 W	carbon	RV302	1-224-642-XX	1 k, adjustable; HUE CENT
R561	1-210-859-11	1.2	1/8 W	carbon	RV352	1-224-972-00	20 k, variable; COLOR
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(nonflammable)	RV353	1-226-074-00	500, variable; HUE
R602	1-213-157-11	15 k	1 W	metal oxide	RV354	1-226-078-00	10 k, cariable; BRIGHT
				(nonflammable)	RV401	1-226-208-00	1 k, adjustable; SHARP
R603	1-213-151 11	4.7	½ W	metal oxide			
R604	1-211-441-11	390	1/8 W	carbon	RV501	1-223-017-00	50, adjustable; H. CENT
				(nonflammable)	RV502	1-224-646-XX	22 k, variable; V. HOLD
R605	1-213-162-11	39 k	½ W	metal oxide	RV503	1-226-210-00	22 k, adjustable; V. SIZE
R607	<u>↑</u> 1-214-175-11	62 k	1/4 W	metal oxide	RV 504	1-224-644-XX	4.7 k, adjustable; PIN AMP
R610	1-211-929-11	82	1/8 W	carbon (nonflammable)	RV601	1-226-105-00	220, adjustable; 115 V ADJ
R615	Λ		1/4 W	metal oxide	RV701	1-224-173-00	2 M, adjustable; SCRN
					RV701	1-224-640-XX	330, adjustable; B. DRIVE
R701	1-202-629-11	220 k	½ W	composition	RV 703	1-226-209-00	3.3 k, adjustable; B. BKG
R702	1-207-907-11	1.2	2 W	metal oxide	RV704	1-224-640-XX	330, adjustable; G. DRIVE
		-	- "	(nonflammable)	RV705	1-226-209-00	3.3 k, adjustable; G. BKG
R703, 704	4 1-202-647-11	1.2 M	½ W	composition	RV706	1-226-209-00	3.3 k, adjustable; R. BKG
R705	1-202-623-11	120 k	½ W	composition	100	1220 200 00	3.5 K, aujustuoio, 11 2120
R706	1-202-635-11	390 k	½ W	composition	RV901 S901 }	<u>1-226-079-00</u>	50 k-A, variable; POWER PULL ON/VOLUME
R707	1-202-647-11	1.2 M	½ W	composition	RV902	1-224-259-XX	5 k, variable; PICTURE
R708	1-202-585-11	3.3 k	½ W	composition			
R709	1-202-647-11	1.2 M	½ W	composition		MESCEL	LANEOUS
R710	1-202-653-11	2.2 M	½ W	composition			
R711	1-202-621-11	100 k	½ W	composition	F601	↑ 1-532-271-XX	Fuse, 4 A
					F603	<u>1-532-536-00</u>	Fuse, 1 A
R712	1-202-595-11	8.2 k	½ W	composition	J901	1-507-539-00	Jack, EARPHONE
R713	1-202-585-11	3.3 k	½ W	composition	NE901	1-519-108-XX	Lamp, neon; POWER
R714	1-206-692-11	15 k	2 W	metal oxide			
				(nonflammable)	S301	1-552-340-00	Switch, rotaly; AUTO
R715	1-202-585-11	3.3 k	½ W	composition	S302	1-552-340-00	Switch, rotaly; AFT
R716	1-206-692-11	15 k	2 W	metal oxide	S901		included in RV901
				(nonflammable)	SG701-7	05 1-519-063-XX	Spark Gap
					SP901	1-502-509-00	Speaker
R717	1-202-585-11	3.3 k	½ W	composition			
R718	1-206-692-11	15 k	2 W	metal oxide	V901	1 8-737-901-05	Picture Tube, 250AKB22
				(nonflammable)	X301	1-527-154-00	Crystal
R801	1-213-146-11	1.8 k	1 W	metal oxide		1-452-032-00	Magnet, disk; 10 mm dia
	(nonflamma	ble) (inch	ided in f	lyback transformer) cement coated		1-452-060-21	Magnet, BMC
R901	1-205-808-11 1 1 1 1 1 1 1 1 1	180	20 W	(nonflammable)		1-452-094-00	Magnet, rotatable disk; 15 mm d
R903	1-217-184-11	8.2	20 W	wirewound			
				(nonflammable)		1-501-156-XX	Antenna, telescopic

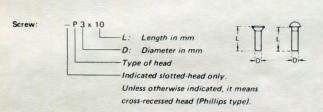
Ref. No.	Part No.	Description
	1-526-086-XX	Socket, picture tube
	1-526-553-00	Cap, anode: included in flyback transformer
	1-533-146-00	Holder, Fuse
	1-534-630-00 1-534-872-00)	Coaxial Cable with Plug
	1-536-401-XX	Terminal Strip, 1L1
	<u>↑</u> 1-536-539-00	Terminal Board, antenna
	1-551-249-00	Coaxial Lable with Plug
	1 1-551-286-12	Cord, power

PACKING MATERIALS AND ACCESSORIES									
Part No.	Description								
X-3701-031-0	Card Ass'y, warranty								
Y-2063-103-0	Antenna, UHF loop (AN-15)								
1-504-034-32	Earphone (ME-20B)								
3-701-352-00	Bag, polyethylene								
3-701-355-01	Lable, tack								
3-701-730-00	Envelope, IBM card								
4-328-921-00	Carton								
4-328-922-00	Sheet, protection								
4-328-923-00	Cushion, lower								
4-328-924-00	Cushion, upper								
4-491-213-21	Safety Tips								
4-491-264-01	Basic Schematic Diagram								
4-495-700-21	Manual, instruction								
7-822-282-01	Card, IBM (white)								
7-822-282-02	Card, IBM (pink)								
7-822-282-03	Card, IBM (green)								

1/4 WATT CARBON RESISTORS

	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
	1.0	1-244-601-11	10	1-244-625-11	100	1-244-649-11	1.0k	1-244-673-11	10 k	1-244-697-11	100 k	1-244-721-11	1.0M	1-244-745-11
	1.1	1-244-602-11	11	1-244-626-11	110	1-244-650-11	1.1k	1-244-674-11	11 k	1-244-698-11	110k	1-244-722-11	1.1M	1-244-746-11
1	.2	1-244-603-11	12	1-244-627-11	120	1-244-651-11	1.2k	1-244-675-11	12 k	1-244-699-11	120 k	1-244-723-11	1.2M	1-244-747-11
	1.3	1-244-604-11	13	1-244-628-11	130	1-244-652-11	1.3k	1-244-676-11	13 k	1-244-700-11	130 k	1-244-724-11	1.3M	1-244-748-11
	1.5	1-244-605-11	15	1-244-629-11	150	1-244-653-11	1.5k	1-244-677-11	15 k	1-244-701-11	150k	1-244-725-11	1.5M	1-244-749-11
	1.6	1-244-606-11	16	1-244-630-11	160	1-244-654-11	1.6 k	1-244-678-11	16 k	1-244-702-11	160 k	1-244-726-11	1.6M	1-244-750-11
	1.8	1-244-607-11	18	1-244-631-11	180	1-244-655-11	1.8k	1-244-679-11	18 k	1-244-703-11	180 k	1-244-737-11	1.8M	1-244-751-11
1	0.9	1-244-608-11	20	1-244-632-11	200	1-244-656-11	2.0k	1-244-680-11	20 k	1-244-704-11	200 k	1-244-728-11	2.0M	1-244-752-11
1	2.2	1-244-609-11	22	1-244-633-11	220	1-244-657-11	2.2k	1-244-681-11	22 k	1-244-705-11	220 k	1-244-729-11	2.2M	1-244-753-11
1	2.4	1-244-610-11	24	1-244-634-11	240	1-244-658-11	2.4k	1-244-682-11	24 k	1-244-706-11	240 k	1-244-730-11	2.4M	1-244-754-11
	2.7	1-244-611-11	27	1-244-635-11	270	1-244-659-11	2.7 k	1-244-683-11	27 k	1-244-707-11	270 k	1-244-731-11	2.7M	1-244-755-11
	3.0	1-244-612-11	30	1-244-636-11	300	1-244-660-11	3.0k	1-244-684-11	30 k	1-244-708-11	300 k	1-244-732-11	3.0M	1-244-756-11
1	3.3	1-244-613-11	33	1-244-637-11	330	1-244-661-11	3.3k	1-244-685-11	33 k	1-244-709-11	330 k	1-244-733-11	3.3M	1-244-757-11
	3.6	1-244-614-11	36	1-244-638-11	360	1-244-662-11	3.6k	1-244-686-11	36 k	1-244-710-11	360 k	1-244-734-11	3.6M	1-244-758-11
	3.9	1-244-615-11	39	1-244-639-11	390	1-244-663-11	3.9k	1-244-687-11	39 k	1-244-711-11	390 k	1-244-735-11	3.9M	1-244-759-11
1	1.3	1-244-616-11	43	1-244-640-11	430	1-244-664-11	4.3 k	1-244-688-11	43 k	1-244-712-11	430 k	1-244-736-11	4.3M	1-244-760-11
1	1.7	1-244-617-11	47	1-244-641-11	470	1-244-665-11	4.7 k	1-244-689-11	47 k	1-244-713-11	470 k	1-244-737-11	4.7M	1-244-761-11
1	5.1	1-244-618-11	51	1-244-642-11	510	1-244-666-11	5.1k	1-244-690-11	51 k	1-244-714-11	510 k	1-244-738-11	5.1M	1-244-762-11
1	5.6	1-244-619-11	56	1-244-643-11	560	1-244-667-11	5.6 k	1-244-691-11	56 k	1-244-715-11	560 k	1-244-739-11		
1	5.2	1-244-620-11	62	1-244-644 11	620	1-244-668-11	6.2k	1-244-692-11	62 k	1-244-716-11	620 k	1-244-740-11		
	5.8	1-244-621-11	68	1-244-645-11	680	1-244-669-11	6.8k	1-244-693-11	68 k	1-244-717-11	680 k	1-244-741-11		
	7.5	1-244-622-11	75	1-244-646-11	750	1-244-670-11	7.5 k	1-244-694-11	75 k	1-244-718-11	750 k	1-244-742-11		
1	8.2	1-244-623-11	82	1-244-647-11	820	1-244-671-11	8.2 k	1-244-695-11	82 k	1-244-719-11	820 k	1-244-743-11		
1	9.1	1-244-624-11	91	1-244-648-11	910	1-244-672-11	9.1k	1-244-696-11	91 k	1-244-720-11	910 k	1-244-744-11		

HARDWARE NOMENCLATURE



Reference Designation	Shape	Description	Remarks	
		SCREWS		
Р	83	pan-head screw	binding-head (B) screw for replacement	
PWH	P	pan-head screw with washer face	binding-head (B) screw and flat washer for replacement	
PS PSP	853	pan-head screw with spring washer	binding-head (B) screw and spring washer for replace- ment	
PSW PSPW	else	pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement	
R	0	round-head screw	binding-head (B) screw for replacement	
К	Ð	flat-countersunk-head screw		
RK	1	oval-countersunk-head screw		
В	P	binding-head screw		
T	1	truss-head screw	binding-head (B) screw for replacement	
F	1	flat-fillister-head screw		
RF	8	fillister-head screw		
BV	(D)	braizer-head screw		

Nut, Washer,	Washer, Retaining ring:			
	N 3			
		-Diameter of usable screw or shaft		
		Reference designation		

Reference Designation	Shape	Description	Remarks
	111111	SELF-TAPPING SCRE	WS
TA	1	self-tapping screw	ex: TA, P 3 x 10
PTP	8	pan-head self-tapping screw	binding-head self- tapping (TA, B) screw for replacement
РТРИН	1	pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
		SET SCREWS	
SC	-	set screw	
SC	⊚ □	hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
		NUT	
N	100	nut	
		WASHERS	
W	0	flat washer	
SW	-0-4	spring washer	
LW	0	internal-tooth lock washer	ex: LW3, internal
LW	0	external-tooth lock washer	ex: LW3, external
		RETAINING RINGS	
E	0	retaining ring	
G	@	grip-type retaining ring	The second

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